SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS,
AND INTERNATIONAL RELATIONS
Christopher Shays, Connecticut
Chairman
Room B-372 Rayburn Building
Washington, D.C. 20515
Tel: 202 225-2548
Fax: 202 225-2382

# MEMORANDUM

To: Members of the Subcommittee on National Security, Emerging Threats, and International Relations

From: Christopher Shays CS
Chairman

Date: September 21, 2006

Subject: Briefing memo for the September 26, 2006 Subcommittee hearing

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Attached find the briefing memo required by Committee rules for the hearing on Tuesday, September 26th entitled *Weapons of Mass Destruction: Current Nuclear Proliferation Challenges*. The hearing will convene at 2:00 p.m., room 2154 Rayburn House Office Building.

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# MEMORANDUM

To: Members of the Subcommittee on National Security, Emerging Threats, and International Relations

From: J. Vincent Chase, Chief Investigator
Kaleb Redden, Presidential Management Fellow

Date: September 21, 2006

Subject: Briefing memorandum for the hearing entitled, *Weapons of Mass Destruction: Current Nuclear Proliferation Challenges*, scheduled for Tuesday, September 26th at 2:00 p.m. in Room 2154 Rayburn House Office Building.

# PURPOSE OF HEARING

The hearing will examine the importance of the Nuclear Nonproliferation Treaty and appropriate steps to strengthen the nonproliferation regime.

# HEARING ISSUE

**1. What steps should be taken to strengthen the nuclear nonproliferation regime?**

**2. To what extent have nonproliferation sanctions affected the policies of rogue nations?**

# BACKGROUND

## History of the Nuclear Nonproliferation Treaty (NPT)

From the beginning of the nuclear age it was apparent that the development of peaceful nuclear capabilities by States could also allow them to divert technology and materials for weapons purposes. The problem of preventing such diversions became a central issue in international discussions on peaceful uses of nuclear energy. Efforts to create an international system enabling all States to have access to nuclear technology under appropriate safeguards began in 1946. These efforts were terminated in 1949 due to serious political differences between the major Powers. By then, both the United States and the former Soviet Union had tested nuclear weapons, and were beginning to build their stockpiles. **(Web Resource 1)**

The escalating nuclear arms race between the United States and the Soviet Union brought President Eisenhower to the United Nations on December 8, 1953. In his "Atoms for Peace" speech before the United Nations, the President sought to solve "the fearful atomic dilemma" by finding some way by which "the miraculous inventiveness of man would not be dedicated to his death, but consecrated to his life." Since Hiroshima, the destructive power of nuclear weapons had increased dramatically. He also realized that nuclear weapons technology, thus far a product of American expertise, would eventually enter the arsenals of the Soviet Union. President Eisenhower felt a moral imperative to warn the American people and the world of this new reality. His "Atoms for Peace" proposal urged that an international organization be established to disseminate peaceful nuclear technology, while guarding against the spread of nuclear weapons into other countries. **(Attachment 1)**

The President's proposal resulted in the establishment of the International Atomic Energy Agency (IAEA), which was charged with the dual responsibility of promoting and controlling nuclear technology. **(Attachment 2)**

IAEA technical assistance activities began in 1958. An interim safeguards system for small nuclear reactors, put in place in 1961, was replaced in 1964 by a system covering larger installations and, over the following years, was expanded to include additional nuclear facilities. Efforts

to strengthen the effectiveness and improve the efficiency of the IAEA safeguards system culminated in the approval of the *Model Additional Protocol* **(Web Resource 2)** by the IAEA Board of Governors in May 1997.

Within the framework of the United Nations, the principle of nuclear nonproliferation was addressed in negotiations as early as 1957 and gained significant momentum in the early 1960s. The structure of a treaty to uphold nuclear nonproliferation as a norm of international behavior had become clear by the mid-1960s, and by 1968 final agreement had been reached on a Nuclear Nonproliferation Treaty (NPT). **(Attachment 3)**

## The Nuclear Nonproliferation Treaty (NPT)

The NPT is based on three pillars—nuclear nonproliferation; enable co-operation for the peaceful use of nuclear energy; nuclear disarmament—and the premise that progress in any one tenant strengthens the integrity of the whole.

The basic provisions of the treaty are to:

- prevent the spread of nuclear weapons (Articles I, II);
- provide assurance, through international safeguards, that peaceful nuclear activities of non-nuclear weapon states are not diverted to making nuclear weapons (Article III);
- promote, to the maximum extent consistent with the other purposes of the treaty, the peaceful uses of nuclear energy through full cooperation (Article IV); and
- express the determination of the parties that the treaty should lead to further progress in comprehensive arms control and nuclear disarmament (Article VI).

The NPT became international law in 1970. At that time there were five nuclear weapon states: USA, UK, USSR, France and China. Since then, India, Israel and Pakistan have developed nuclear weapons, and they remain non-signatory countries. The 188 governments **(Attachment 4)** that ratified the NPT meet every five years at a Review Conference to assess the implementation of the treaty. The NPT provided in Article X for a conference

to be convened 25 years after its entry into force to decide whether the NPT should continue in force indefinitely, or be extended for an additional fixed period or periods. Accordingly, at the 1995 NPT Review and Extension Conference parties to the NPT agreed without a vote on the Treaty's indefinite extension, and decided that review conferences should continue to be held every five years. **(Web Resource 3)**

## 1995 Nuclear Nonproliferation Treaty Review Conference

The 1995 Review Conference held April 17 to May 12, 1995 affirmed the need to continue to move towards the full realization and effective implementation of the provisions of the NPT and nuclear disarmament. Accordingly, the Conference permanently extended the treaty to be reviewed every 5 years and adopted principles and objectives for assessing progress in nuclear nonproliferation; disarmament; nuclear-weapon-free zones; security assurances; safeguards; and the peaceful uses of nuclear energy. **(Attachment 5)**

## 2000 Nuclear Nonproliferation Treaty Review Conference

The 2000 Review Conference met at the United Nations in New York from April 24 to May 19, 2000. The Conference was the first to meet following the Treaty's indefinite extension. States examined the implementation of the Treaty's provisions. The States examined the decisions concerning the principles and objectives for nuclear nonproliferation and disarmament. The States also strengthened and adopted a resolution on the resolution on the Middle East. **(Attachment 6)**

While procedural norms were resolutely observed, the Review Conference was short on substance concerning the Treaty's three main objectives: nuclear cooperation, nuclear disarmament, and nuclear nonproliferation.

On nuclear disarmament, the five nuclear weapons states – Russia, China, France, the United Kingdom, and the United States – jointly renewed in an "unequivocal undertaking" their previous commitment to reduce and eventually eliminate their nuclear weapons. But as in the past – most notably in 1968 and 1995 – no timetable was set either to measure progress or to achieve the final destruction of all nuclear weapons.

Similarly, no progress was made on renouncing or modifying the United States and Russian declarations that nuclear weapons are the "cornerstone" of each nation's military security. Neither country backed away from its current posture of "launch on warning," nor did either suggest abandoning the "option" of first use of nuclear weapons. Russia's January 2000 declaration that it reserves the right to use nuclear weapons in war if other means of "resolving the crisis have failed," together with the US position that America might use nuclear weapons to retaliate for a chemical or biological weapons attack, were unchanged.

With regard to nonproliferation, the Review Conference called on India, Pakistan, and Israel – all of which have nuclear weapons – to join the NPT as non-nuclear weapons states. Cuba, another non-signatory state at the time, was also encouraged to become a party to the NPT. **(Web Resource 6)**

## 2005 Nuclear Nonproliferation Treaty Review Conference

The purpose of the 2005 review conference was to strengthen the treaty by agreeing to measures that reinforced compliance with both nonproliferation and disarmament obligations and commitments through negotiations. **(Attachment 7)** There had been a number of developments since 2000 that affected the NPT, not least of which concern nuclear terrorism following the attacks in the United States on September 11, 2001 **(Web Resource 7)** as well as disagreement about compliance with steps agreed to at the 1995 and 2000 Conferences. **(Web Resource 8)**

The Review Conference began without having reached a decision on procedural issues, such as the agenda and the establishment of subsidiary bodies, although they were supposed to be settled before the Conference. Two thirds of the Conference was spent resolving these procedural issues due to differences of views between the Non-Aligned Movement States, centering on the Middle Eastern countries, on one hand, and the Western countries on the other hand. As a result, time for substantive discussion and for coordination on the language of the final document was extremely limited.

Although each of the three main Review Conference Committees held substantive discussions, none of them were able to produce a consensus document. There were several reasons for this impasse: first was the severe time constraint; second, there was no convergence of views among concerned States and groups of States on some major issues (such as the 1995 resolution

on the Middle East including Israel, Iranian nuclear issues, and nuclear disarmament issues including the Comprehensive Nuclear-Test-Ban Treaty); and third, the difficulty posed by rules requiring consensus. Furthermore, the President of the Conference did not issue any statement on substantive issues at the end of the Conference. Nevertheless many States pointed out the important role of the NPT statement ensuring international peace and security as well as the necessity of compliance. **(Web Resource 9)**

## The International Atomic Energy Agency (IAEA)

The pledge not to acquire nuclear weapons is verified through the application of "nuclear safeguards" measures developed by the International Atomic Energy Agency (IAEA). The IAEA is responsible for administering a system of nuclear material accounting coupled with periodic and special inspections to ensure that nuclear material is not diverted from peaceful uses to military uses. The IAEA is an independent intergovernmental, science and technology-based organization that serves as the global focal point for nuclear cooperation. **(Web Resource 4)**

The IAEA mission includes:

- assisting member States, in the context of social and economic goals, in planning for and using nuclear science and technology for various peaceful purposes, including the generation of electricity, and facilitating the transfer of such technology and knowledge in a sustainable manner to developing member States;

- developing nuclear safety standards and, based on these standards, promoting the achievement and maintenance of high levels of safety in applications of nuclear energy, as well as the protection of human health and the environment against ionizing radiation; and

- verifying through an inspection system that States comply with their commitments under the Nonproliferation Treaty and other nonproliferation agreements to use nuclear material and facilities only for peaceful purposes.

In the IAEA Safeguards Statement for 2005, **(Web Resource 5)** the IAEA reported 156 safeguards agreements in force with the IAEA. The IAEA's

findings and conclusions for 2005 are reported below with regard to each type of safeguards agreement. These findings and conclusions are based upon an evaluation of all the information available to the IAEA in exercising its rights and fulfilling its safeguards obligations for 2005.

- Seventy States had both comprehensive safeguards agreements in force and additional protocols in force or being otherwise applied:

  (a) For 24 of these States, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared nuclear material or activities. On this basis, the IAEA concluded that, for these States, all nuclear material remained in peaceful activities.

  (b) For 46 of the States, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities. Evaluations regarding the absence of undeclared nuclear material and activities for each of these States remained ongoing. On this basis, the IAEA concluded that, for these States, declared nuclear material remained in peaceful activities.

  (c) Of these 46 States, the Islamic Republic of Iran (Iran) had been found to have been previously engaged in undeclared nuclear activities. In 2005, the Board of Governors found that Iran's failures and breaches of its obligations to comply with its comprehensive safeguards agreement constituted non-compliance. Verification of the correctness and completeness of Iran's declarations remained ongoing.

- Safeguards activities were implemented for 77 States with comprehensive safeguards agreements in force, but without additional protocols in force or being otherwise applied.[1] For these States, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities. On this basis, the IAEA concluded that, for these States, declared nuclear material remained in peaceful activities.

[1] The IAEA was not able to perform verification activities in the Democratic People's Republic of Korea (DPRK) in 2005 and could not, therefore, draw any conclusions about the material or activities for that State.

- As of the end of 2005, 36 non-nuclear-weapon States party to the Treaty on the Nonproliferation of Nuclear Weapons (NPT) had not yet brought comprehensive safeguards agreements with the IAEA into force as required by Article III of that Treaty. For these States, the IAEA could not draw any safeguards conclusions.

## The Additional Protocol

The IAEA's safeguards system is designed to verify that nuclear materials and activities that States declare to the IAEA are not misused or diverted from peaceful purposes. The discovery in the early 1990s that Iraq had developed a clandestine nuclear weapons program while an NPT member state, South Africa's renunciation and dismantlement of nuclear weapons and accession to the NPT in 1991, and difficulties verifying North Korea's NPT compliance all suggested a need to detect *undeclared* nuclear activities.

These developments prompted the IAEA to review its legal authorities and determine additional authorities it needed to strengthen its ability to detect undeclared nuclear activities. This review reaffirmed the IAEA's right to conduct "special inspections" under certain circumstances, but it also highlighted the limits of the agency's ability to certify the absence of undeclared activity.

The IAEA took several measures to strengthen safeguards under existing agreements, and codified additional authority needed to certify the absence of undeclared nuclear material in a model new agreement called a "Model Additional Protocol." States that accede to an Additional Protocol submit to a more intrusive safeguards system that gives IAEA inspectors access to all points of the nuclear fuel cycle, short-notice inspections of all buildings at a nuclear site, information about the manufacture and export of sensitive nuclear-related technologies, and the right to take environmental samples beyond declared nuclear sites.[2]

[2]International Atomic Energy Agency, "IAEA Safeguards: Stemming the Spread of Nuclear Weapons," Information Series, 02-02901/FS Series 1/02/E. http://www.iaea.org/Publications/Factsheets/English/S1_Safeguards.pdf; Kaleb Redden, "Inspecting the Inspectorate: A Closer Look at Financial and Political Support for the IAEA" *The Nonproliferation Review*. Fall/Winter 2003. http://www.cns.miis.edu/pubs/npr/vol10/103/103red.pdf.

As of August 15, 2006, 77 nations have ratified the Additional Protocol. Notably, Iran signed an Additional Protocol under heavy pressure in December 2003, but has yet to ratify it.[3]

## Additional Treaties and Nonproliferation Efforts

The international goal of nuclear nonproliferation includes other ongoing efforts beyond the NPT.

### *Cooperative Threat Reduction (CTR)*

When the Soviet Union collapsed in 1991, the world suddenly faced the prospect that its nuclear weapons, fissile material, and scientific expertise would be susceptible to theft or exploitation by terrorists or rogue states. To reduce this threat, Senators Sam Nunn (D-GA) and Richard Lugar (R-IN) proposed "The Soviet Nuclear Threat Reduction Act of 1991" to help the states of the former Soviet Union secure or eliminate nuclear and other weapons or material. In 1993 it was renamed the Cooperative Threat Reduction Program.[4]

Projects of the Cooperative Threat Reduction Program have focused on destroying Russian strategic weapons delivery systems; dismantling nuclear warheads; improving security of stored nuclear weapons; eliminating nuclear material, improving fissile material storage security, control, and accounting procedures; engaging former weapons scientists in peaceful research, reactor conversions or shutdowns; export control and border security improvements; and chemical and biological weapons destruction and demilitarization; among others. Along with accomplishments in these areas inside Russia, CTR initiatives facilitated the transfer of nuclear weapons inherited by the Ukraine, Belarus, and Kazakhstan to Russian control and an accession of these newly independent states to the NPT as non-nuclear weapon states.[5]

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[3] International Atomic Energy Agency, "Strengthened Safeguards System: Status of Additional Protocols," http://www.iaea.org/OurWork/SV/Safeguards/sg_protocol.html.
[4] Defense Threat Reduction Agency. "Cooperative Threat Reduction: History." http://www.dtra.mil/oe/ctr/history.cfm.
[5] Nuclear Threat Initiative, "The Nunn-Lugar Cooperative Threat Reduction (CTR) Program" http://www.nti.org/db/nisprofs/russia/forasst/nunn_lug/overview.htm.

In the 1990s, Congress appropriated approximately $400 million per year to Cooperative Threat Reduction-related programs.[6] From 2000-2010, the US will spend a projected $1 billion per year on the program.

The mission and profile of Cooperative Threat Reduction has been expanded to meet new challenges in recent years. At the G8 Summit in 2002, G8 leaders launched a "Global Partnership against the Spread of Weapons and Materials of Mass Destruction" that committed to $20 Billion in funding over ten years to help the Russia and other states reduce WMD stockpiles, with the United States providing half of that funding (informally known as "10 + 10 over 10").[7] The United States has increasingly authorized CTR activities in places outside of the former Soviet Union, including employing former weapons scientists in Iraq and Libya.[8] Senators Richard Lugar and Barak Obama (D-IL) introduced legislation to expand CTR work to conventional weapons stockpiles in 2005.[9]

In June 2006, the United States and Russia signed a Protocol to extend the US-Russia Cooperative Threat Reduction (CTR) Umbrella Agreement for another seven years.[10] In addition, in September 2006 the United States and Russia signed a liability agreement clearing a legal hurdle for the disposal of weapon grade nuclear material. **(Attachment 8)**

*Fissile Material Control*

Controlling nuclear material is a topic that both predates and extends beyond loose nuclear material in the former Soviet Union. Obtaining fissile material is the most difficult obstacle to the production of nuclear weapons, but arms control and nonproliferation measures have to date avoided restrictions of fissile material accumulations.[11] There is more than 3000

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[6] Ibid.
[7] U.S. Department of State Fact Sheet, "The G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction" August 24, 2004. http://www.state.gov/t/np/rls/fs/34967.htm.
[8] Sharon Squassoni, "Globalizing Cooperative Threat Reduction: A Survey of Options" Congressional Research Service Report for Congress. August 15, 2004. http://fpc.state.gov/documents/organization/32006.pdf#search=%22Cooperative%20Threat%20Reduction%22.
[9] "Lugar-Obama Bill introduced" November 1, 2005. http://lugar.senate.gov/pressapp/record.cfm?id=248096.
[10] "Cooperative Threat Reduction Agreement with Russia Extended" June 19, 2006. http://www.whitehouse.gov/news/releases/2006/06/20060619-7.html.
[11] Steve Fetter, A Comprehensive Transparency Regime For Warheads and Fissile Materials," *Arms Control Today*, January/February 1999. http://www.armscontrol.org/act/1999_01-02/sfjf99.asp.

metric tons of fissile material in the world, enough for 230,000 nuclear weapons.[12]

Calls for an end to fissile material production date to the earliest proposals for stemming the spread of weapons of mass destruction.[13] A Fissile Material Cutoff Treaty (FMCT) has long been under consideration, but stands little chance of immediate progress. The negotiations for a treaty took place in 1995 and briefly in 1998 at the Conference on Disarmament in Geneva, but have been held up by disputes over the scope of the agreement, verification requirements, and linkages to other issues.[14]

Beyond a topline cutoff of material production, improvements in transparency, the physical protection of nuclear materials, and fissile material disposal warrant attention. Some progress has been made in this area due to the increased recognition of the threat of nuclear terrorism following September 11th. The Convention on the Physical Protection of Nuclear Material was amended in 2005 to allow members to protect nuclear facilities and material in peaceful domestic use, storage and transport, and to expand procedures for cooperation to locate and recover stolen or smuggled nuclear material and mitigate any consequences.[15] Following September 11th, the IAEA developed an "Action Plan for Protection Against Nuclear Terrorism" that provides services to improve the physical protection of nuclear materials at the request of member states and maintains an Illicit Trafficking Database to track illegal movement of nuclear and radioactive materials.[16] And the United States has taken a leading role in securing radiological sources, sponsoring a major international conference in 2003,[17] improving the "Code of Conduct on the Safety and Security of Radioactive Sources," and working

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[12] David Albright and Kevin O'Neill, *The Challenges of Fissile Material Control.* Institute for Science and International Security Press, 1999. http://www.isis-online.org/publications/fmct/book/Front%204%20w_intro.pdf.

[13] Nuclear Threat Initiative, "Fissile Material Cutoff Treaty," http://www.nti.org/e_research/cnwm/ending/fmct.asp#_ftn1.

[14] Ibid.

[15] International Atomic Energy Agency, "Convention on the Physical Protection of Nuclear Material." http://www.iaea.org/Publications/Documents/Conventions/cppnm.html.

[16] International Atomic Energy Agency, "IAEA Action Plan to Combat Nuclear Terrorism" http://www.iaea.org/NewsCenter/Features/Nuclear_Terrorism/; International Atomic Energy Agency, "Promoting Nuclear Security: What the IAEA is Doing." http://www.iaea.org/Publications/Factsheets/English/nuclsecurity.pdf#search=%22Promoting%20Nuclear%20Security%3A%20What%20the%20IAEA%20is%20doing%22.

[17] International Atomic Energy Agency, *Security of Radioactive Sources*, March 10-13, 2003, http://www-pub.iaea.org/MTCD/publications/PDF/Pub1165_web.pdf

with other governments to removing highly high risk fissile material from poorly secured installations.[18] In May 2004, the Department of Energy launched the Global Threat Reduction Initiative which combines nuclear and radiological security work under one umbrella program.[19]

Nevertheless, many of the pressing challenges associated with controlling fissile materials – including limiting the potential proliferation of uranium enrichment programs (in Iran, Australia, Argentina, South Africa, Brazil, and other countries) that could make fissile material for either reactors or weapons, expanding and accelerating the successful Megatons-to-Megawatts Program between the United States and Russia that will eliminate 500 metric tons of Russian weapons-grade uranium by 2014, and limiting the growth in plutonium reprocessing programs in India and Japan as well as other interested countries – remain inadequately addressed.[20]

*Nuclear Suppliers Group (NSG)*

The Nuclear Suppliers Group is an organization comprising the key supplier states of nuclear technology and material. NSG members agree to abide by common export control guidelines for control of nuclear and nuclear-related exports, and to share information on developments of proliferation concern.[21]

Led by the United States, the initial NSG participants first met in November 1975 following India's 1974 test of a nuclear explosive device, an event that brought with it fresh evidence that nuclear technology transferred with peaceful intentions could be misused. The group was formed two years later, along with an initial set of "Guidelines for Nuclear Transfers,"

[18] For example, see: U.S. Department of State Fact Sheet, "Project Vinca" August 23, 2002. http://www.state.gov/r/pa/prs/ps/2002/12962.htm.
[19] U.S. Department of Energy, "Department Of Energy Launches New Global Threat Reduction Initiative" May 26, 2004. http://www.energy.gov/news/1359.htm.
[20] Charles D. Ferguson and William C. Potter, "Lining up to enrich uranium" *International Herald Tribune*. September 12, 2006. http://www.iht.com/articles/2006/09/12/opinion/edferguson.php.; United States Enrichment Corporation Fact Sheet, "US-Russian Megatons to Megawatts Program" June 27, 2006. http://www.usec.com/v2001_02/HTML/megatons_fact.asp. Steve Fetter and Frank Von Hippel, "Is U.S. Reprocessing Worth The Risk?" *Arms Control Today*, September 2005. http://www.armscontrol.org/act/2005_09/Fetter-VonHippel.asp.
[21] U.S. Department of State Fact Sheet, "The Nuclear Suppliers Group" July 29, 2004. http://www.state.gov/t/np/rls/fs/34729.htm.

published in 1978.[22] These guidelines are often referred to as the "trigger list" because the export of items listed there requires IAEA safeguards at the recipient facility. The guidelines also require physical protection standards; the exercise of particular caution when transferring sensitive facilities, technology and weapons-usable materials; and strengthened conditions for retransfer.[23]

The group stopped meeting in full membership in 1977, but was compelled to reconvene in full in 1991 following the revelations of Iraq's clandestine nuclear program. In 1992, the NSG agreed to extend its controls to nuclear-related dual-use (having both nuclear and non-nuclear applications) equipment, material, and technology, and to avoid significant nuclear transfers except in cases where the recipient had accepted IAEA safeguards for all of its nuclear activities.[24] This latter requirement was subsequently endorsed by the 1995 NPT Review Conference.[25]

More recently, President Bush called on NSG members not to sell enrichment or reprocessing technologies to states that do not already possess full-scale, functioning enrichment and reprocessing plants in his February 11, 2004 speech announcing new nonproliferation initiatives.[26] The NSG considered the President's proposal when it met in 2004, along with several of his other proposals, including: requiring accession to the Additional Protocol for nuclear transfers, assuring reasonably priced fuel for states renouncing enrichment and reprocessing, and suspending cooperation with states that the IAEA Board of Governors found in non-compliance with their safeguards obligations. Though members agreed on the need for increased vigilance of nuclear transfers, they did not reach consensus on these proposals.[27]

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[22] Henry D. Sokolski, *Best of Intentions: America's Campaign Against Strategic Weapons Proliferation.* Praeger, 2001. p.63.
[23] U.S. Department of State Fact Sheet, "The Nuclear Suppliers Group" July 29, 2004. http://www.state.gov/t/np/rls/fs/34729.htm.
[24] Henry D. Sokolski, *Best of Intentions: America's Campaign Against Strategic Weapons Proliferation.* Praeger, 2001. p.64.
[25] Nuclear Suppliers Group, "History of the NSG" http://www.nuclearsuppliersgroup.org/history.htm.
[26] George W. Bush, "President Announces New Measures to Counter the Threat of WMD" Fort Lesley J. McNair, National Defense University, Washington, D.C. February 11, 2004. http://www.whitehouse.gov/news/releases/2004/02/20040211-4.html.
[27] U.S. Department of State Fact Sheet, "The Nuclear Suppliers Group" July 29, 2004. http://www.state.gov/t/np/rls/fs/34729.htm.

NSG membership currently stands at 44, with China entering the group in 2004.[28] The organization operates as an informal, voluntary association that is not universal nor all proceedings open. This less formal association has allowed the group to establish tough measures to avoid the transfer of nuclear and related equipment and technology, avoiding the "watering down" of provisions required to reach consensus in larger bodies or agreements such as the NPT. It has also served as a model for other export control regimes for other sensitive technologies (e.g., The Australia Group (for sensitive chemical and biological materials and equipment), the Missile Technology Control Regime).[29]

Although weapons of mass destruction are defined as including biological, chemical, and nuclear arms, the Subcommittee's September 26th hearing discussion will focus on nuclear nonproliferation. Future hearings on WMD will focus on other areas of concern chemical and biological proliferation.

## DISCUSSION OF HEARING ISSUES

### 1. What steps should be taken to strengthen the nuclear nonproliferation regime?

The Nuclear Nonproliferation Treaty (NPT) is the cornerstone of the nonproliferation regime. To strengthen the regime, some believe parties to the treaty need to "revert to the fundamental and balanced nonproliferation and disarmament commitments that were made under the treaty and confirmed in the 1995 when the treaty was extended indefinitely."[30]

The signatories to the NPT are facing several problems including failure to make progress towards nuclear disarmament, breaches of the treaty or IAEA safeguard obligations, failure to respond to parties who withdraw from the NPT, and the lack of enforcement provisions.[31]

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[28] Ibid; Sean Lucas, "China Enters the Nuclear Suppliers Group: Positive Steps in the Global Campaign against Nuclear Weapons Proliferation" Center for Nonproliferation Studies, Monterey Institute of International Studies, November 2004. http://www.nti.org/e_research/e3_57a.html.
[29] Henry D. Sokolski, *Best of Intentions: America's Campaign Against Strategic Weapons Proliferation.* Praeger, 2001 p.64.
[30] *Weapons of Terror: Freeing the World of Nuclear, Biological, and Chemical Arms*, Weapons of Mass Destruction Commission, June 1, 2006.
[31] Ibid.

Specifically, parties to the NPT need to reaffirm their commitment to the following:

Universality-Universal adherence to the NPT is an urgent priority. All States not yet party to the NPT should called upon to accede to the NPT at the earliest date, particularly those States that operate unguarded nuclear facilities. Every effort should be made by all States to achieve this objective.

Nonproliferation-The proliferation of nuclear weapons seriously increases the danger of nuclear war. The NPT has a vital role to play in preventing the proliferation of nuclear weapons. Signatory States should make every effort to implement the NPT in all its aspects to prevent the proliferation of nuclear weapons and other nuclear explosive devices, without hampering the peaceful uses of nuclear energy.

Nuclear disarmament-Nuclear disarmament is substantially facilitated by the easing of international tension and the strengthening of trust between States. The undertakings with regard to nuclear disarmament as set out in the NPT should thus be fulfilled with determination. In this regard, the Nuclear-Weapon States should reaffirm their commitment, as stated in article VI, to pursue in good faith negotiations on effective measures relating to nuclear disarmament.

Nuclear-weapon-free zones-The establishment of internationally recognized nuclear-weapon-free zones, on the basis of arrangements freely arrived at among the States of the region concerned, enhances global and regional peace and security and should be reaffirmed.

The development of nuclear-weapon-free zones, especially in regions of tension, such as in the Middle East, as well as the establishment of zones free of all weapons of mass destruction, should be encouraged as a matter of priority, taking into account the specific characteristics of each region. The cooperation of all the Nuclear-Weapon States and their respect and support for the relevant protocols is necessary for the maximum effectiveness of such nuclear-weapon-free zones and protocols.

Security assurances-Further steps should be considered to assure Non-Nuclear-Weapon States party to the NPT against the use or threat of use of nuclear weapons. These steps could take the form of an internationally legally binding instrument.

Safeguards-The IAEA is the competent authority responsible to verify and assure compliance with its safeguards with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Nothing should be done to undermine the authority of the IAEA in this regard. States that have concerns regarding non-compliance with the safeguards agreements of the NPT by the States should direct such concerns, along with supporting evidence and information, to the IAEA to consider, investigate, draw conclusions and decide on necessary actions in accordance with its mandate.

All States required by article III of the NPT to sign and bring into force comprehensive safeguards agreements and which have not yet done so should do so without delay.

Nuclear fissile material transferred from military use to peaceful nuclear activities should, as soon as practicable, be placed under IAEA safeguards in the framework of the voluntary safeguards agreements in place with the Nuclear-Weapon States. Safeguards should be universally applied once the complete elimination of nuclear weapons has been achieved.

Peaceful uses of nuclear energy-Particular importance should be attached to ensuring the exercise of the inalienable right of all the parties to the NPT to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I, II as well as III of the NPT.

Preferential treatment should be given to the Non-Nuclear-Weapon States to promote the peaceful uses of nuclear energy, taking the needs of developing countries particularly into account. Transparency in nuclear-related export controls should be promoted within the framework of dialogue and cooperation among all interested States party to the NPT.

All States should, through rigorous national measures and international cooperation, maintain the highest practicable levels of nuclear safety, including in waste management, and observe standards and guidelines in nuclear materials accounting, physical protection and transport of nuclear materials.

Attacks or threats of attack on nuclear facilities devoted to peaceful purposes jeopardize nuclear safety and raise serious concerns regarding the

application of international law. The United Nations should consider such an attack and develop actionable measures to deal with such an event.

## 2. To what extent have nonproliferation sanctions affected the policies of rogue nations?

Five nations, the United States, Russia, France, Britain, and China acknowledge having nuclear arsenals and are recognized as nuclear weapon possessors under the NPT. Three nations that have not signed the NPT, India, Israel, and Pakistan, possess significant nuclear weapons capabilities. Several countries, including Argentina, Brazil, and South Africa suspended their nuclear weapons programs and joined the NPT in the 1990s. Ukraine, Belarus, and Kazakhstan all gave up former Soviet weapons on their territories and joined the NPT as non-nuclear weapons states as well. Despite these actions, regional concerns remain. These include:

### North Korea

North Korea was a member of the NPT, but developed nuclear weapons programs in defiance of the treaty. In early 2003, North Korea withdrew from the Nuclear Nonproliferation Treaty (NPT) and restarted nuclear installations that it had shut down under the U.S.-North Korean Agreed Framework of 1994. The facilities include a five megawatt nuclear reactor and a plutonium reprocessing plant used to convert reactor fuel rods into nuclear weapons-grade plutonium. North Korea removed 8,000 reactor fuel rods from a storage pond where the rods had been kept since 1994, and it subsequently claimed that it had reprocessed the rods into weapons-grade plutonium. Such reprocessing would give North Korea enough plutonium for approximately six atomic bombs, according to experts.

### Iran

Iran, also an NPT signatory, is suspected of pursuing nuclear weapons technology. Iran's attempts to acquire nuclear, chemical, and biological weapons and missiles to deliver them, along with its longtime support of terrorism, led President Bush in his January 29, 2002, State of the Union address to label Iran part of an "axis of evil," along with Iraq and North Korea. Taking advantage of both foreign assistance and the dual-use nature of WMD- and missile-related technologies, Iran has received help from entities

in Russia, China, and North Korea for its missile program, and from entities in Russia and Pakistan for its nuclear program.

Iran continues to test missiles and has moved ahead with its civilian nuclear program, which many observers believe supports a covert nuclear weapons program. In March 2002, a CIA official testified to Congress that the United States would "most likely" face an intercontinental ballistic missile threat from Iran by 2015 possibly flight-testing an ICBM by 2010 with Russian or North Korean help.

Iran's nuclear program has been the subject of intense scrutiny. Although most concerns before 2003 focused on Russian cooperation with Iran on completing the Bushehr power reactors, recent revelations have focused concerns on the scope of Iran's uranium centrifuge enrichment program, its laser enrichment program, plutonium separation activities, and heavy water production. The IAEA Board of Governors has stopped short of declaring Iran in violation of the NPT, although the United States has pushed strongly for such a declaration. However, the IAEA has reported numerous failures by Iran to disclose facilities and activities. In late 2003, Iran agreed to suspend certain aspects of its nuclear program in exchange for promises by the European Union to facilitate nuclear cooperation. Iran also signed an Additional Protocol to a nuclear safeguards agreement in December 2003. One year later, however, Iran has not yet taken the legislative steps to ratify the Additional Protocol, and there have been significant gaps in implementing the suspension of enrichment and reprocessing activities.

Finally, some have expressed concern about Chinese and Russian activities that may encourage proliferation in the other regions. Recipients of China's technology reportedly include Pakistan and countries that the State Department says support terrorism, such as Iran and North Korea. Congress has concerns about whether the President has obtained China's effective cooperation in the multilateral efforts to stop Iran's and North Korea's nuclear weapon programs.

Since 1991, China has taken some steps to mollify US concerns about its role in weapons proliferation. Nonetheless, supplies from China to other nations have aggravated trends that result in ambiguous technical aid, grater indigenous capabilities, longer range missiles, and secondary (retransferred)

proliferation. The intelligence community has consistently reported to Congress, China remains a "key supplier" of weapons and missile technology.

## WITNESS TESTIMONY

***Dr. Hans Blix,*** Chairman, The Weapons of Mass Destruction Commission (WMDC) will discuss the findings and recommendations of the WMDC covered in the Commissions book entitled, *Weapons of Mass Terror: Freeing the World of Nuclear, Biological and Chemical Arms.* Dr. Blix will focus his testimony on nuclear proliferation and enforcement of the Nuclear Nonproliferation Treaty.

***William H. Tobey,*** Deputy Administrator for Defense Nuclear Proliferation, Department of Energy will testify about the success of the cooperative threat reduction program in stemming proliferation of nuclear material and what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty.

***Mr. Andrew K. Semmel,*** Deputy Assistant Secretary, Department of State will testify about what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty and why the Nuclear Nonproliferation Treaty failed to prevent the spread of nuclear weapons.

***Mr. Jack David,*** Deputy Assistant Secretary of Defense for Combating Weapons of Mass Destruction and Negotiations Policy, Department of Defense will testify about what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty and why the Nuclear Nonproliferation Treaty failed to prevent the spread of nuclear weapons.

***Mr. Gene Aloise,*** Director, Government Accountability Office will testify about IAEA verification activities including the *Model Additional Protocol* which covers the effectiveness and efficiency of the IAEA safeguards system, **(Web Resource 2)** the Nuclear Suppliers Group, and nuclear safeguard assistance the U.S. provides to other countries.

***Ambassador Thomas Graham, Jr.***, Chairman, Bipartisan Security Group, Global Security Institute will testify about what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty, why the Nuclear Nonproliferation Treaty failed to prevent the spread of nuclear weapons and why some countries lack confidence in the nonproliferation regime.

***Mr. Baker Spring***, F.M. Kirby Research Fellow for National Security Policy, The Heritage Foundation will testify about what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty, why the Nuclear Nonproliferation Treaty failed to prevent the spread of nuclear weapons and why some countries lack confidence in the nonproliferation regime.

***Mr. Jonathan Granoff***, President, Global Security Institute will testify about what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty, why the Nuclear Nonproliferation Treaty failed to prevent the spread of nuclear weapons and why some countries lack confidence in the nonproliferation regime.

***Mr. Henry D. Sokolski,*** Nonproliferation Policy Education Center will testify about what steps should be taken to strengthen compliance under the Nuclear Nonproliferation Treaty, why the Nuclear Nonproliferation Treaty failed to prevent the spread of nuclear weapons and why some countries lack confidence in the nonproliferation regime.

***Professor Frank von Hippel***, Co-Chairman, International Panel on Fissile Materials will testify about stricter international controls over fissile material and how to keep the illicit material out of the hands of terrorists.

# ATTACHMENTS

1. President Eisenhower's *Atoms for Peace* speech, before the United Nations on Peaceful Uses of Atomic Energy, December 3, 1953.

2. International Atomic Energy Agency-Fact sheet.

3. *Treaty on the Nonproliferation of Nuclear Weapons*, May 11, 1995.

4. The List of States that have Ratified or Acceded to the NPT as of March 1, 2005.

5. The 1995 NPT Review and Extension Conference: Decisions and Resolutions Adopted.

6. The 2000 NPT Review Conference: Decisions and Resolutions Adopted.

7. The Library of Congress, Congressional Research Service (CRS) Report for Congress, *NPT Compliance Issues*, RS22125, Updated January 25, 2006.

8. United States Department of Energy, Office of Public Affairs, U.S. and Russia Sign Protocol: Nonproliferation Program Will Eliminate Enough Plutonium for 16,000 Nuclear Weapons, September 15, 2006.

# WEB RESOURCES

1. 2005 Review Conference of the Parties to the Treaty on the Nonproliferation of Nuclear Weapons, *Background Information*,
May 2-27, 2005, New York, New York. *(accessed September 7, 2006)*
http://www.un.org/events/npt2005/background.html

2. *MODEL PROTOCOL ADDITIONAL TO THE AGREEMENT(S) BETWEEN STATE(S) AND THE INTERNATIONAL ATOMIC ENERGY AGENCY FOR THE APPLICATION OF SAFEGUARDS,* International Atomic Energy Agency, September 1997. *(Accessed September 7, 2006)*
http://www.iaea.org/Publications/Documents/Infcircs/1998/infcirc540corrected.pdf#search=%22Model%20Additional%20Protocol%20(INFCIRC%2F540)%20%22

3. Proliferation of Nuclear Weapons, *Chronology of Events Relating to Nuclear Nonproliferation*, May 2-27, 2005, New York, New York. *(Accessed September 11, 2006)*
http://www.iaea.org/Publications/Factsheets/English/npt_chrono.html

4. International Atomic Energy Agency (Accessed September 11, 2006)
http://www.iaea.org/index.html

5. *Safeguards Statement for 2005*, International Atomic Energy Agency *(Accessed September 11, 2006)*
http://www.iaea.org/OurWork/SV/Safeguards/es2005.pdf

6. Center for Defense Information, Defense Monitor, *Results of the Nuclear Nonproliferation Treaty Review Conference*, Volume XXIX, Number 5 2000, Colonel Daniel Smith, USA (Ret.). *(Accessed September 12, 2006)*
http://www.cdi.org/dm/2000/issue5/Results.html

7. CRS Report for Congress, *Weapons of Mass Destruction: The Terrorist Threat*, RL31332, March 7, 2002.
http://www.congress.gov/erp/rl/pdf/RL30033.pdf

8. *THE 2005 NUCLEAR NONPROLIFERATION TREATY REVIEW CONFERENCE 2005*, Nick Ritchie, June 2005. *(Accessed September 12, 2006)*
http://www.brad.ac.uk/acad/bdrc/publications/NR_NPT_%202005.pdf#search=%222005%20Nuclear%20Nonproliferation%20Treaty%20Review%20Conference%22

9. CRS Report for Congress, *Arms Control and Nonproliferation Activities: A Catalog of Recent Events*, RL30033, Updated January 19, 2006.
http://www.congress.gov/erp/rl/pdf/RL30033.pdf

# WITNESS LIST

## PANEL ONE

***Dr. Hans Blix,*** Chairman
The Weapons of Mass Destruction Commission

## PANEL TWO

***William H. Tobey,***
Deputy Administrator for Defense Nuclear Proliferation
National Nuclear Security Administration (NNSA)
Department of Energy

***Mr. Andrew K. Semmel,***
Deputy Assistant Secretary
International Security and Nonproliferation (ISN)
Department of State

***Mr. Jack David,***
Deputy Assistant Secretary of Defense
for Combating Weapons of Mass Destruction and Negotiations Policy
Department of Defense

***Mr. Gene Aloise,*** Director
Natural Resources and Environment
Government Accountability Office

## PANEL THREE

***Ambassador Thomas Graham, Jr.***, Chairman
Bipartisan Security Group
Global Security Institute

***Mr. Baker Spring***
F.M. Kirby Research Fellow for National Security Policy
The Heritage Foundation

***Mr. Jonathan Granoff***, President
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Nonproliferation Policy Education Center

***Professor Frank von Hippel***, Co-Chairman
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